CLAIMS

1. A method to reduce the power consumed by a data storage device comprising:

providing a data storage device including:

a spindle motor having at least two terminals;

a spindle connected with the spindle motor;

at least one disk connected with the spindle; and

an actuator assembly having a head in communication with each of the at least one disk;

applying a voltage potential across two terminals of the spindle motor to cause the spindle to rotate;

rotating the spindle at a rotation rate approximating a design speed;

removing the at least one head from communication with the at least one disk;

removing the voltage potential across the two terminals of the spindle motor;

repeatedly switching between applying the voltage potential and removing the voltage potential across two terminals of the spindle motor such that an approximately constant current is maintained across two terminals of the spindle motor;

receiving a command to perform an operation on the at least one disk;

maintaining the first voltage potential across two terminals of the spindle motor; and

placing the at least one head in communication with the at least one disk.

2. The method of claim 1, wherein the switching is at a rate greater than 50kHz.

3. The method of claim 1, wherein the spindle motor includes three terminals.

4. The method of claim 3, wherein rotation of the spindle is determined by measuring a voltage potential across a third terminal.

5. A method to reduce the power consumed by a data storage device having at least one disk and a head in communication with each of the at least one disk comprising:

applying a voltage potential across two terminals of a spindle motor having at least two terminals to cause the at least one disk to rotate;

rotating the at least one disk at a rotation rate approximating a design speed;

removing a head from communication with each of the at least one disk;

removing the voltage potential across the two terminals of the spindle motor;

repeatedly switching between applying the voltage potential and removing the voltage potential across two terminals of the spindle motor such that an approximately constant current is maintained across two terminals of the spindle motor;

receiving a command to perform an operation on the at least one disk;

maintaining the first voltage potential across two terminals of the spindle motor; and

placing the at least one head in communication with the at least one disk.

6. The method of claim 5, wherein the switching is at a rate greater than 50kHz.

7. The method of claim 5, wherein the spindle motor has three terminals.

8. The method of claim 7, wherein the rotation rate is determined by measuring a voltage potential across a third terminal

9. A processor having instructions for:

applying a voltage potential across two terminals of a spindle motor having at least two terminals to cause the at least one disk to rotate;

rotating the at least one disk at a rotation rate approximating a design speed;

removing a head from communication with each of the at least one disk;

removing the voltage potential across the two terminals of the spindle motor;

repeatedly switching between applying the voltage potential and removing the voltage potential across two terminals of the spindle motor such that an approximately constant current is maintained across two terminals of the spindle motor;

receiving a command to perform an operation on the at least one disk;

maintaining the first voltage potential across two terminals of the spindle motor; and

placing the at least one head in communication with the at least one disk.

10. A system for storing and retrieving information, comprising:

a rotatable means for storing data;

a means for rotating said rotatable means;

a means for applying a voltage to said means for rotating such that said rotatable means rotates at a design speed; and

a means for selectively switching between applying a voltage and removing a voltage such that an approximately constant current is delivered to said means for rotating.

11. The system of claim 10, including a means for communicating with said rotatable means, wherein the means for communicating with said rotatable means is removed from communication with said rotatable means when switching between applying said voltage and removing said voltage.

12. A system for storing and retrieving information, comprising:

a spindle;

at least one disk connected with the spindle;

a head in communication with each of said at least one disk;

a spindle motor having at least two terminals connected with the spindle for rotating said at least one disk; and

a power driver electrically connected with said spindle motor;

wherein a voltage potential is applied across two terminals of said spindle motor such that said at least one disk rotates at a design speed;

wherein when said head is removed from communication with said at least one disk, said power driver switches between applying said voltage potential and removing said voltage potential across two terminals such that a constant current is delivered to said spindle motor.

13. The method of claim 12, wherein the switching is at a rate greater than 50kHz.

14. The system of claim 12, wherein said spindle motor includes three terminals.

15. The method of claim 13, wherein the rotation rate is determined by measuring a voltage potential across a third terminal.